

**A New Species of *Mallochia* (Hymenoptera: Ichneumonidae)
Introduced to Texas to Control *Eoreuma loftini* (Dyar)
(Lepidoptera: Pyralidae) in Sugarcane¹**

ROBERT A. WHARTON

Texas A&M University, Department of Entomology, Biological Control Center,
College Station, Texas 77843.

Abstract.—A new species of *Mallochia* is described from material collected in Sinaloa, Mexico from *Eoreuma loftini* (Dyar) (Pyralidae). This species is being released in Texas as part of a biological control program directed against *E. loftini* on sugarcane.

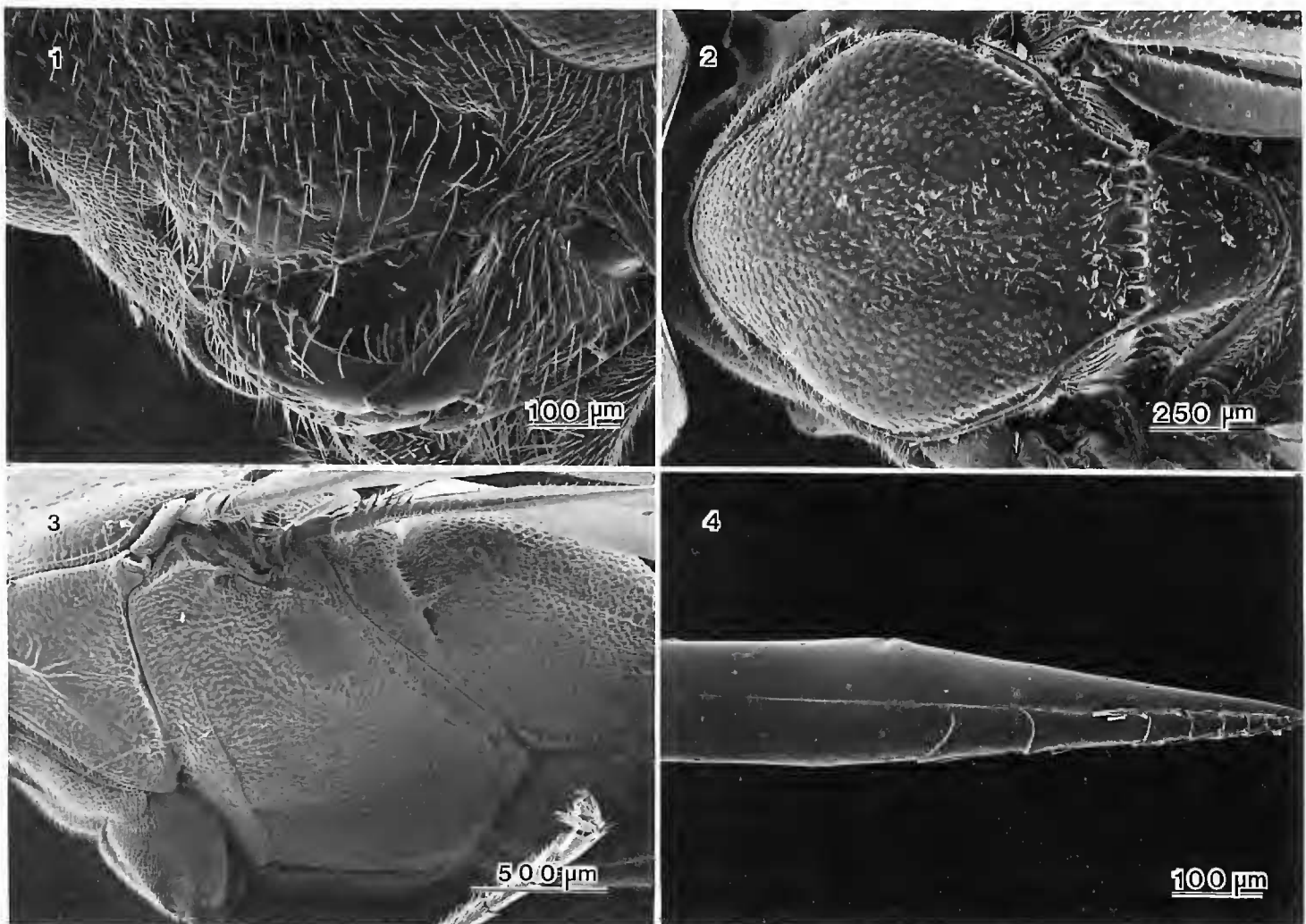
The New World genus *Mallochia* contains eight described species, four of which have been recorded from North America (Townes and Townes, 1962, 1966). There are no published rearing records for the North American species, and hosts for *Mallochia* are unknown. The following description is provided for biological control workers who have collected this species and released it in Texas for control of *Eoreuma loftini* (Dyar), a stem borer in sugarcane.

***Mallochia pyralidis*, NEW SPECIES**

Clypeal tooth present, but very small (Fig. 1). Fore wing 3.5–6.8 mm long. Mesonotal punctures very coarse, nearly adjacent, separated by 0.2–0.5 × their diameter (Fig. 2); notauli often impunctate or nearly so in small specimens; about 20% of specimens with punctures near middle of lateral mesonotal lobe more widely spaced, separated by 1 × their diameter; posterior half of median mesonotal lobe punctato-strigose. Mesopleuron similarly coarsely and very densely punctate (Fig. 3), except anterior-dorsally in male, where punctures are more widely spaced, separated by about 1 × their diameter. Ovipositor tip as in Figure 4; tip length 3.25 ± 0.20 ($n = 10$) times depth at node. Female petiole elongate, $\frac{2}{3}$ rds– $\frac{3}{4}$ ths length of hind coxa; dorsal-lateral carina between spiracle and posterior margin of petiole varying in strength with size of specimen, represented by weak, non-carinate ridge in smallest specimens.

Coloration.—Male: head and body laterally marked with black, pale yellow to white, and orange-brown as in *M. agenioides* Viereck (Townes and Townes, 1962: Fig. 331a); extent of black, yellow, and orange-brown on propodeum variable, but pattern generally as in Townes and Townes, 1962: Figure 331a; 2nd and 3rd hind tarsi white; hind basitarsus varying from completely black to black with apical $\frac{1}{2}$ white; white portion of 4th tarsus varying in extent, but with at least extreme apex black; face, orbital region of frons and vertex, anterior half of pronotum, notauli (except extreme anterior ends), scutellum, postscutellum, 3rd

¹ Approved as TA No. 19777 by the Texas Agricultural Experiment Station.



Figures 1–4. *Mallochia pyralidis*, new species (SEM). 1. Face, showing small median tooth on ventral margin of clypeus (arrow). 2. Mesonotum, showing sculpture. 3. Mesopleuron, showing sculpture. 4. Ovipositor tip.

lateral area of propodeum, and extreme apices of petiole and 2nd tergum pale yellow; remainder of metasoma dorsally orange-brown; scape brown ventrally; antenna, frons and vertex medially, occiput, remainder of pro-, meso-, and meta-nota, apical $\frac{1}{2}$ th of hind tibia dorsally, and all 5th tarsi black, 4th tarsi of fore and mid leg and 3rd tarsus of mid leg dark brown to black; fore wing hyaline, with well-defined infumate band apically, band extends into radial cell.

Female: orange-brown; ovipositor sheath and apical tarsomeres dorsally dark brown; flagellomeres 6–8 entirely and 5 and 9 usually yellow, with ventral surface slightly darker; apical flagellomeres usually brown ventrally; pedicel often dark brown to black distally, remainder of antenna black; inner orbits often and anterior $\frac{1}{2}$ of pronotum usually faintly yellow; fore wing hyaline with 2 very well-defined bands; proximal band extends into median cell.

Holotype ♀, MEXICO, *Sinaloa*, Los Mochis-Culiacan, 21–28.V.1983, reared from *Eoreuma loftini* (Dyar) on sugarcane, J. W. Smith, Jr., H. W. Browning, F. D. Bennett (deposited in U.S. National Museum). Paratypes: 3 ♀, 5 ♂, same data as holotype (TAMU = Texas A&M University Collection); 23 ♀, 12 ♂, USA, *Texas*, Brazos County, College Station, X.1983–IV.1984, lab colony reared on *Eoreuma loftini* (Dyar), established from material originally collected in Sinaloa, Mexico (TAMU).

Diagnosis.—This species is nearly identical to *Mallochia agenioides*, but the female is darker, with the wing bands better developed, and the basal flagellomeres

black rather than brown. Both *Mallochia agenoides* and *Mallochia pyralidis* exhibit extreme sexual dimorphism, particularly in mesosomal coloration. These two are separated from other *Mallochia* species by the coarse and dense mesonotal and mesopleural punctures, combination of orange mesosoma in female and variegated mesosoma in male, and double wing bands in the female.

The specimen from Arizona listed by Townes and Townes (1962) as a possible female of *Mallochia strigosa* (Cresson) is identical to females of *Mallochia pyralidis*, but the basal flagellomeres are brown, rather than black (possibly due to fading with age). Unfortunately, the ovipositor tip is broken on this specimen, and thus the deep ovipositor noted by Townes and Townes (1962) could not be completely verified. The identity of this specimen must therefore remain doubtful.

In addition to *Mallochia pyralidis*, the following *Mallochia* species from the TAMU collection are recorded from Texas, or portions of Texas, for the first time: *Mallochia laevis* Townes, Washington County, Somerville Reservoir (1 ♀); Brazos County, College Station (2 ♀, 2 ♂); previously known from Florida and Georgia. *Mallochia frontalis* Townes, Anderson County, Salmon (2 ♀); Brazos County, College Station (2 ♀); and Erath County, Bluffdale (1 ♀); previously known in Texas only from Bexar County.

ACKNOWLEDGMENTS

I am most grateful to J. W. Smith, Jr. and C. W. Agnew (TAMU) for making this material available, and to L. Carroll's (TAMU) assistance with the literature. C. D. Michener (Univ. Kansas) and D. Azuma (Philadelphia Acad. Sci.) kindly made available the *Mallochia* species in their care.

LITERATURE CITED

- Townes, H., and M. Townes. 1962. Ichneumon flies of America North of Mexico: 3. Subfamily Gelinae, Tribe Mesostenini. Bull. U.S. Natl. Mus., 216(3), 602 pp.
- . 1966. A catalogue and reclassification of the Neotropical Ichneumonidae. Mem. Amer. Entomol. Inst., 8, 367 pp.